The Future Of Artificial Intelligence

How AI Will Transform The Global Economy

The Race for AI Supremacy, Global Investment, Jobs, Productivity and the New Digital Industrial Revolution



Artificial intelligence is moving from laboratories and technology companies into the core of the global economy. It is influencing how businesses design products, deliver services, manage money, manufacture goods and make decisions. The next phase will not be defined only by smarter software, but by the countries and companies able to combine computing power, data, energy, skills and responsible governance to turn AI into lasting economic value.

A New Engine of Economic Change

Earlier industrial revolutions were driven by steam power, electricity, mass production and the internet. Artificial intelligence may become a similarly broad enabling technology. Unlike a machine designed for one task, modern AI systems can assist with language, analysis, pattern recognition, prediction, software development, design and decision support across many industries.

The economic impact will depend on adoption, not just invention. A powerful model does not automatically increase productivity. Businesses must redesign workflows, integrate reliable data, train employees, protect sensitive information and measure whether AI improves quality, speed or cost. Countries also need affordable computing infrastructure, dependable electricity, research institutions and a workforce able to use the technology.

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AI Is More Than a Technology Story

AI is now an economic, industrial and geopolitical issue. Nations are competing to develop advanced models, secure semiconductor supplies, build data centres, attract research talent and set rules for safe deployment. Businesses are competing to use AI to improve productivity and create new products. Workers and professionals are adapting to changing tasks and expectations.

The central question is not whether AI will affect the economy. It is how quickly its benefits will spread, who will capture the value, and whether institutions can manage the risks.

1. The Global AI Race: United States, China and the

Rest of the World

The United States remains a leading centre of private AI investment, frontier-model development, cloud computing and venture capital. Its advantages include major technology firms, deep capital markets, research universities, semiconductor design capabilities and a large ecosystem of start-ups. The Stanford AI Index 2026 estimates that US private AI investment in 2025 was many times larger than that of China or Europe.

China is a major competitor with strengths in manufacturing, engineering talent, applied research, digital platforms and large-scale deployment. Its AI ecosystem is supported by a combination of private companies, universities, industrial policy and state-backed investment. Comparing countries only through private funding can understate public-sector support and the different structures of national investment.

Europe has important research institutions, industrial capabilities and regulatory influence. Its challenge is to convert scientific strength and market scale into more globally competitive AI

companies, infrastructure and investment. Other economies—including Japan, South Korea, Singapore, the United Arab Emirates and India—are developing specialised strengths and national strategies.

A Race Across the Entire AI Stack

AI leadership depends on more than the model itself. It requires chips, memory, high-speed networks, cloud platforms, data centres, software tools, energy, cooling systems, data and skilled people. Countries that control several layers may enjoy stronger strategic influence. Those that rely on external providers may face cost, access or security constraints.

The OECD's Digital Economy and Society Outlook 2026 describes AI computing capacity as a strategic asset. It highlights the importance of specialised chips, data centres, cloud access, energy, water, networks and skills. This makes AI infrastructure a major economic and policy issue.

2. The Data-Centre Boom and the Economics of Computing

The growth of generative AI has increased demand for computing infrastructure. Data centres house the servers and specialised accelerators that train and operate AI systems. They also require power distribution, cooling, water management, fibre connectivity, security and skilled operations teams.

This investment creates opportunities for construction, electrical equipment, cooling technology, renewable energy, grid infrastructure, cybersecurity and engineering services. It also creates constraints. Electricity grids may not be ready for large new loads, water resources may be limited, and the cost of advanced chips can make computing expensive.

The OECD notes that AI-ready data centres require much higher power density than traditional facilities. Their economics depend on the cost and availability of compute, energy, networks and suitable sites. A project announcement should therefore not be confused with a completed, commercially viable facility.

Who Can Benefit from the Infrastructure Cycle?

The benefits can extend beyond major technology companies. Manufacturers can supply cables, switchgear, cooling equipment, racks and precision components. Engineering firms can design and maintain facilities. Utilities can invest in grid capacity. Smaller technology businesses can develop software, monitoring, security and energy-efficiency solutions.

The long-term test will be utilisation and productivity. Investors must ask whether computing capacity will be used efficiently, whether customers will pay enough to cover capital and operating costs, and whether technology changes could make equipment obsolete sooner than expected

3. AI and the Transformation of Manufacturing



Manufacturing is one of the sectors where AI can connect digital intelligence with physical production. Machine-vision systems can inspect products; predictive maintenance can identify equipment problems before breakdowns; AI-supported planning can improve inventory and scheduling; and digital twins can help engineers test production changes virtually.

In a factory, even small improvements can have a meaningful financial impact. Reducing machine downtime, material wastage, energy use or product rejection can improve margins. AI can also help manufacturers forecast demand, plan procurement and identify bottlenecks across multiple production lines.

Smart Factories and Industry 4.0

A smart factory combines connected machines, sensors, automation, industrial software and analytics. AI adds the ability to identify patterns and support decisions. However, successful implementation requires reliable data, secure networks, machine compatibility, employee training and clear responsibility for operational decisions.

Manufacturers should begin with a specific problem rather than buying technology for its own sake. A pilot project could focus on visual quality inspection, maintenance forecasting, energy optimisation or production scheduling. Results should be measured against a baseline before the system is expanded.

4. AI Opportunities for MSMEs

Small and medium enterprises may not have the budgets of large corporations, but accessible AI tools can help them improve marketing, customer service, accounting workflows, translation,

document processing, inventory forecasting and business analysis.

A small exporter can use AI to research potential markets, prepare product descriptions, translate customer communications and organise documentation. A manufacturer may use analytics to understand rejection patterns or estimate material requirements. A professional firm can automate repetitive document review while retaining human oversight.

The main barriers are digital readiness, data quality, cost, skills, cybersecurity and trust. MSMEs need practical training and affordable access to secure tools. Industry associations, chambers of commerce, technical institutions and professional bodies can support adoption through demonstrations, workshops and shared services.

A Practical AI Adoption Roadmap for MSMEs



- Identify one repetitive or costly business process that could benefit from AI.
- Check whether the business has accurate, permissioned and well-organised data.
- Choose a tool that fits the task, budget and confidentiality requirements.
- Run a limited pilot and compare time, cost, accuracy and customer outcomes.
- Keep human review for financial, legal, safety and customer-impacting decisions.
- Train employees and document how the tool should be used.
- Expand only when measurable benefits outweigh costs and risks.

5. AI in Banking, Finance and Insurance

Financial institutions are using AI in areas such as fraud detection, transaction monitoring, customer support, credit assessment, document processing, compliance surveillance and risk analysis. AI can process large volumes of information quickly and identify unusual patterns that may be difficult to detect manually.

In banking, AI assistants can help customers find information and complete routine tasks. In insurance, systems can support claims triage, document review and risk assessment. In capital markets, machine learning can assist with research, surveillance and operational processes.

These applications require careful governance. Financial decisions affect people's access to credit, insurance and essential services. Models must be tested for accuracy, bias, explainability, privacy and resilience. Institutions remain responsible for decisions made with AI assistance.

6. AI and the Future of Professional Services

Accounting, cost management, audit, taxation, consulting and legal services are likely to be reshaped by AI. Tools can extract information from invoices, classify transactions, compare documents, summarise regulations, identify anomalies and assist with financial analysis. This can reduce time spent on routine work and allow professionals to focus more on judgement, interpretation and advice.

What Changes for Chartered Accountants and Cost Accountants?

For Chartered Accountants, AI may support audit planning, document review, reconciliation, tax research, financial reporting and risk assessment. For Cost Accountants, it can help analyse production data, allocate overheads, monitor material consumption, identify cost variances and support cost-reduction programmes.

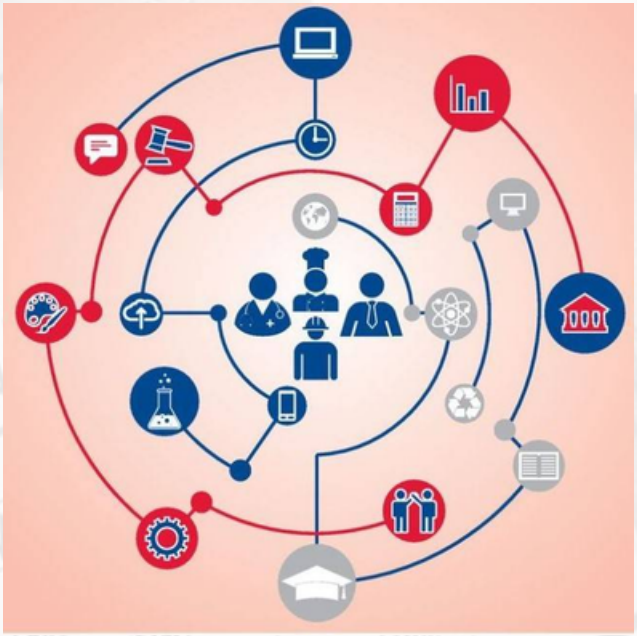
AI can also improve budgeting and forecasting by processing larger datasets and testing different scenarios. However, outputs must be checked against accounting standards, tax law, audit evidence and the underlying business facts. An AI-generated explanation is not a substitute for professional judgement.

The Professional of the Future

The value of a finance professional will increasingly depend on the ability to combine domain knowledge with data literacy, technology awareness, communication and ethical judgement. Professionals who understand both business processes and AI limitations can help organisations adopt tools responsibly.

Professional bodies and educational institutions should strengthen training in analytics, automation, cybersecurity, data governance and AI-assisted workflows. Continuing professional development will be essential as tools and regulations evolve.

7. Jobs, Skills and the Changing Labour Market



AI is expected to change tasks across occupations, but its effect will not be uniform. Some activities may be automated, some jobs may be redesigned and new roles may emerge. The immediate impact may be more visible in hiring patterns, entry-level work and task allocation than in headline employment totals.

The Stanford AI Index 2026 reports that AI-related labour-market effects are uneven and that some early-career roles in exposed occupations have experienced pressure. It also reports that a portion of surveyed organisations expect workforce reductions in selected functions. These findings should not be interpreted as proof that AI will eliminate all jobs in those fields.

Routine, predictable tasks are more exposed to automation. Work involving complex judgement, accountability, human relationships, physical adaptability and domain expertise may change differently. Most occupations contain a mixture of tasks, meaning AI may transform jobs rather than simply remove them.

Reskilling Is an Economic Priority

Workers will need opportunities to learn how to use AI tools, evaluate outputs, protect data and work alongside automated systems. Employers should invest in training before and during deployment. Education systems should emphasise critical thinking, communication, quantitative reasoning, creativity and practical problem-solving.

For young professionals, the objective should be to develop strong fundamentals and learn to use AI as a productivity tool—not to depend on it as a substitute for understanding. Human accountability, professional ethics and the ability to verify information will remain essential.

8. India's AI Opportunity

India has several advantages that can support AI adoption: a large technology workforce, strong IT services capabilities, a growing start-up ecosystem, digital public infrastructure, a large domestic market and a wide range of economic sectors where productivity can improve. AI can support healthcare, agriculture, education, financial inclusion, logistics, manufacturing and public service delivery.

India's opportunity is not limited to developing frontier models. It can build applications for local languages, public services, small businesses and industry-specific needs. It can also provide AI engineering, integration, testing, cybersecurity, data services and professional support to global customers.

Building Domestic AI Capability

A competitive AI ecosystem requires access to compute, quality data, research talent, reliable energy, investment and a strong market for applications. India must balance investment in domestic capability with access to international technologies and collaboration. No single country can efficiently build every component of the AI stack independently.

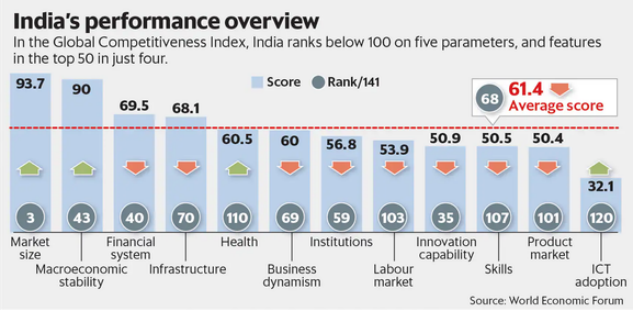
The IndiaAI Mission and related public initiatives seek to strengthen compute access, innovation, datasets, skills and responsible AI development. Their long-term impact will depend on execution, transparent governance, broad access and the ability to connect research with commercial and public-sector applications.

AI for Indian MSMEs and Industry

AI can help Indian MSMEs improve customer acquisition, export research, inventory planning, quality inspection, procurement and financial administration. In manufacturing clusters, shared digital services and common training facilities may reduce adoption costs.

Large companies and PSUs can also help build supplier capability by encouraging digital documentation, quality traceability and process improvement among vendors. This can make supply chains more productive and help smaller enterprises meet institutional standards.

India's Global Competitiveness



To become a trusted global AI partner, India must strengthen data protection, cybersecurity, research quality, intellectual-property frameworks, digital infrastructure and specialised skills. It must also ensure that AI systems work effectively across Indian languages and diverse social and economic conditions.

The country can contribute to a more inclusive AI economy by developing affordable solutions for healthcare, education, agriculture and public services. The most valuable innovations may not always be the largest models; they may be practical tools that solve important problems at scale.

9. Risks, Regulation and Responsible AI

AI creates risks alongside its benefits. Systems can produce inaccurate information, reflect bias in training data, expose confidential information or be manipulated through malicious inputs. Deepfakes and synthetic media can undermine trust. Automated systems can also make errors at a scale and speed that exceed traditional manual processes.

Organisations should establish policies covering data access, model selection, human review, record keeping, cybersecurity, incident reporting and accountability. High-impact uses—such as hiring, lending, healthcare, insurance and public services—require stronger safeguards and careful testing.

Regulation should protect people and public interests without unnecessarily blocking beneficial innovation. Governments face the challenge of balancing safety, competition, privacy, national security and access to technology. International coordination can help reduce fragmentation and support common principles.

10. The Energy and Environmental Cost of AI

AI depends on physical infrastructure. Data centres require electricity, cooling, water, land, networks and hardware. As AI use grows, energy demand and the environmental footprint of computing are receiving greater attention.

The International Energy Agency has warned that data-centre electricity demand is set to rise substantially over the second half of this decade. The precise impact will depend on efficiency improvements, the pace of AI adoption, hardware design, location and the energy mix used to supply facilities.

AI can also help reduce emissions by improving grid management, industrial efficiency, building controls, transport routing and climate modelling. The net effect will depend on whether efficiency gains outweigh additional resource consumption.

Efficiency Must Be Designed In

Developers and operators can reduce resource use through more efficient chips, model compression, better cooling, renewable electricity procurement, workload scheduling and improved data-centre design. Businesses should consider the environmental cost of AI services when selecting providers and designing applications.

11. AI and Global Economic Inequality

Countries with advanced computing infrastructure, capital and research ecosystems may capture a disproportionate share of AI-related value. Economies with limited access to compute, data, skills or finance risk becoming technology consumers rather than creators. This could widen productivity and income gaps.

Access to affordable computing, open research, local-language tools, education and international collaboration can help broaden participation. Developing countries also need the ability to adapt AI systems to local priorities and legal frameworks.
Within countries, benefits may also be uneven. Large firms can invest in infrastructure and specialist talent more easily than small businesses. Workers with digital skills may gain new opportunities while others face disruption. Public policy and employer investment will influence how widely productivity gains are shared.

12. A Business Framework for Responsible AI Adoption

Before deploying AI, organisations should assess the business case and the consequences of failure. A useful framework includes:

- Purpose: Define the business problem and the expected measurable benefit.
- Data: Confirm that data is accurate, lawful to use, secure and relevant.
- Risk: Identify financial, legal, operational, privacy and reputational risks.
- Human oversight: Decide which outputs require review and who is accountable.
- Testing: Evaluate accuracy, bias, reliability and performance under real conditions.
- Security: Protect systems against unauthorised access, data leakage and misuse.
- Monitoring: Track errors, costs, user feedback and model changes over time.
- Governance: Maintain policies, documentation, training and escalation procedures.

13. What Businesses Should Do Now

Businesses do not need to automate everything at once. They should identify a small number of high-value use cases, test them carefully and scale what works. Management should communicate openly with employees, provide training and redesign roles where appropriate.

Boards and senior leaders should treat AI as a strategic capability, not simply an IT purchase. They should understand where AI is used, what data it processes, how suppliers manage risk and whether the organisation can explain important automated decisions.

14. The Next Decade: What Could Change?

Over the next decade, AI may become embedded in everyday business software, industrial equipment, financial services, healthcare systems, logistics networks and public administration. The distinction between digital and physical industries may become less clear as AI systems interact with machines, sensors and connected infrastructure.

AI agents—systems designed to complete multi-step tasks—may automate more complex workflows. Their commercial value will depend on reliability, permissions, integration with enterprise systems and the ability to handle exceptions. In many settings, human approval will remain necessary.

The economics of AI will also evolve. Model costs may fall for some tasks, while demand for high-performance computing may continue to rise. Competition may shift towards specialised models, proprietary data, distribution, trusted applications and efficient inference. Companies that can deliver measurable outcomes at sustainable cost will be better positioned than those relying only on publicity.

Five Trends to Watch

- AI infrastructure becomes strategic: compute, chips, data centres, electricity and networks will shape national competitiveness.
- Industry adoption deepens: AI moves from pilots into production, quality control, logistics and enterprise operations.
- Work changes unevenly: tasks and job profiles evolve, increasing the need for reskilling and human oversight.
- Regulation and trust become competitive factors: privacy, security, transparency and accountability influence adoption.
- AI access broadens: smaller firms and emerging economies seek affordable compute, tools and practical applications.

Conclusion: Turning Intelligence into Economic Value

Artificial intelligence has the potential to become one of the defining technologies of the global economy. It is attracting record investment, changing the structure of competition and creating new opportunities across manufacturing, finance, healthcare, education, logistics and professional services.

But investment alone does not guarantee productivity. The real gains will come when organisations redesign processes, train people, use reliable data, manage risks and measure outcomes. Countries that combine research, infrastructure, skills, energy and sound governance will be better placed to capture the benefits.

For India, AI offers an opportunity to strengthen manufacturing, improve public services, expand technology exports and help MSMEs become more competitive. The challenge is to build domestic capability while remaining connected to global innovation and ensuring that the benefits are widely shared.

For CA, CMA and other professionals, AI will change the way work is performed, but it will also increase the importance of judgement, ethics, verification,

governance and strategic advice. The future professional will need to understand both the technology and the business consequences of its use.

The future of AI will not be determined only by who builds the most powerful model. It will be determined by who uses the technology responsibly, productively and inclusively to solve real economic problems.



CMA CS Subhash Aggarwal

Former Director Finance CCI